

Rapid Decisive Operations in this Decade

# Unified**Vision** 2001

Joint Concept Refinement Experiment



Unified Vision 2001 (UV 01), U.S. Joint Forces Command's recently completed experiment, was a significant event in the Command's ongoing transformation campaign to examine and develop promising new joint concepts, organizational structures, and emerging technologies. The goal of this campaign is to transform America's Armed Forces to meet current and future challenges of the 21st Century.

Unified Vision 2001, one of a series of limited objective experiments, validated Rapid Decisive Operations, our current future warfighting concept, and highlighted the power of unified military and government agency action. The insights and outcomes of UV 01 provide a solid foundation for next summer's major field experiment Millennium Challenge 2002.

Developing advanced techniques, tools, and organizations for 21st century challenges requires new thinking and aggressive experimentation. U.S. Joint Forces Command's concept development and experimentation efforts, in support of transformation, are indispensable to the current war on terrorism. This war cannot be won with legacy means alone.

Many of the concepts and tools developed during UV01, and the resulting insights from the experiment, have direct applicability to this war—both at home and abroad. For example, the Rapid Decisive Operations joint warfighting concept is designed to defeat

## A Message From General Kernan

### New Tools for the Challenges of the War on Terrorism



an adversary quickly and decisively through a series of actions that employ the full range of national capabilities, generate maximum effect on the enemy, and break the coherence of the enemy's ability to fight. Rapid Decisive Operations enablers such as Operational Net Assessment, Effects Based Operations and the Standing Joint Force Headquarters will enhance our ability to routinely dominate all military domains (land, sea, air, space, and cyber). U.S. Joint Forces Command is already using many of these concepts and their tools as we execute our responsibilities in the war on terrorism. These concepts also have definite applicability to other conventional threats that still exist and potential threats of the future.

Experiments like UV01 are exploring national security challenges few thought possible a few years ago. Current security requirements have given our efforts added emphasis and have made us take a closer look at the near-term value of joint concept development and experimentation work. Our continuing concept development through experiments and other exploratory venues will assuredly focus on the broad issues of national security - to include how the joint force can best be used to protect the homeland - as well as the more specific issues and challenges involved with taking the fight to the enemy wherever they may be.

I think you will find the information in this document stimulating, thought provoking, and exciting.

Sincerely,

A handwritten signature in dark ink, appearing to read "W. F. Kernan".

**General William F. Kernan**

United States Army

Commander in Chief, U.S. Joint Forces Command



## Table of Contents

<b>Unified Vision 01: The Experiment</b> .....	<b>1</b>
Strategic Requirement .....	2
Scenario .....	3
Participants .....	4
Week-by-Week learning .....	5
Virtual Experimentation Environment .....	7
 <b>The Ideas</b> .....	 <b>8</b>
Characteristics of the Future Joint Battlespace .....	8
Rapid Decisive Operations – A New Idea for Warfighting ....	9
Ideas for New Joint Capabilities .....	11
 <b>The Findings</b> .....	 <b>18</b>
 <b>The Way Ahead</b> .....	 <b>21</b>
 <b>Summary</b> .....	 <b>23</b>

# Unified Vision 01: The Experiment

Unified Vision 2001 (UV 01) was a major joint experiment conducted in the U.S. Joint Forces Command (JFCOM) Joint Training and Analysis and Simulation Center (JTASC), Suffolk, Virginia from 30 April to 25 May 2001 by JFCOM, the Services, U.S. Special Operations Command (SOCOM), U.S. Transportation Command (TRANSCOM), U.S. Central Command (CENTCOM) and U.S. Space Command (SPACECOM). The experiment focused on refining advanced concepts for addressing several key joint warfighting challenges we face in the 21st century. These included:

- How do we establish a coherently joint command and control capability at the operational level of war with the joint warfighting proficiency necessary for the complexity of the operational environment quickly enough to meet the requirements for action generated by the pace of crisis development in the information age?
- How do we fuse the tremendous quantity of information available across the interagency community into a common, shared, actionable understanding of the battlespace?
- How do we gain within the military component of an operation the level of battlespace awareness sufficient to support the rapid and decisive application of an effects-based approach to operations?
- How do we export functions (such as analysis or targeting) previously done in the theater of operations to national centers of excellence

## *Findings Overview*

- Strongly indicated that the Standing Joint Command and Control Element (SJC2E) / Standing Joint Force Headquarters is a powerful tool for solving the recurring problem of our joint force headquarters not reaching the level of joint proficiency rapidly enough for current requirements
- Participation of the interagency community in operational-level analysis and planning increased the ability of the JFHQ to produce and execute a truly effects-based approach to the mission
- Supported the potential of an effects-based approach at the operational level of war
- Supported the fundamental soundness of the ideas underpinning Rapid Decisive Operations
- Effects-based assessment emerged as the most challenging aspect of effects-based operations (EBO)
- Highlighted the potential of Operational Net Assessment (ONA) to enable rapid preparation of plans
- The National Fusion Center (NFC) idea, or Knowledge Management Center, merits further examination

(like today's Joint Warfighting Analysis Center) to improve the quality and speed of products and to reduce our forward footprint?

- How do we rapidly and decisively influence, coerce, or destroy a hostile regional power that is asymmetrically employing advanced anti-access and information capabilities in an attempt to defeat us at the operational level of war?

The experiment hypothesized that if a standing joint force command and control element within a regional unified command headquarters were provided with reachback capabilities to the interagency community and national centers of excellence, then it could form a joint operational-level headquarters with the right mix of skills and battlespace understanding to conduct the analysis, planning, and execution necessary to effectively execute an effects-based operation against a competent regional threat.

UV 01 generated significant findings that will assist the Secretary of Defense in further developing and implementing a set of joint capabilities for rapid global response to a variety of 21st century military challenges. It also produced a variety of recommendations that will support the execution of Millennium Challenge 2002 (MC 02), the next major joint experiment.

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## Strategic Requirement

The United States faces a world in which adversaries have the ability to attack our homeland, our forces, and our allies with little or no warning. Our ability to forward station or deploy forces will be

constrained by politics, geography, and increasingly sophisticated adversary anti-access capabilities — terrorism, ballistic and cruise missiles, submarines, mines, and weapons of mass effects. Legacy warfighting concepts and, in some cases, legacy forces are ill suited to deal with this new security environment. We can no longer plan on having months to deploy massive

forces to a theater rich in supporting infrastructure. Instead we must be prepared to engage in the first hours or days of a crisis with tailored capabilities that can be brought to bear quickly, that are informed by





**Retired U.S. Ambassador Robert Oakley discusses recent developments with retired Marine Col. Gary W. Anderson, Director of the Center for Emerging Threats and Opportunities (CETO). Oakley, one of two retired U.S. Ambassadors working with the experiment, served as a subject-matter expert on the Interagency Community.**

intimate knowledge of the adversary, and that are focused on producing those effects that will rapidly force our adversary to change the behavior that threatens our interests. Enabled by joint forces with the right capabilities for its requirements, this new American way of war will enhance our national security. Reflecting this new way of war, Rapid Decisive Operations is one JFCOM experimentation concept aimed at transforming our military forces to meet the challenges of the future.

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## Scenario

The scenario for the experiment represented a highly likely and dangerous threat to our national interests and, in hindsight, proved to be a remarkably accurate portrayal of what within a few months was to become the first battle of our next war. The experiment presented a non-state threat that was operating within the context of a sponsoring state. The threat possessed a composite of the advanced military capabilities available in the global market to any client with sufficient means or sponsorship to acquire it. It employed these capabilities asymmetrically to deny the joint force access to the operational area,



to intimidate neighbors into denying U.S. basing opportunities, to preemptively achieve strategic objectives, and to attack our national will and force projection capability through special operations and terrorist attacks against key facilities in the operational area and in the continental United States. The physical conditions of the battlespace presented a requirement for global projection, restricted operational maneuver space, extended operational distances as well as extremely difficult and varied terrain.

The experiment was framed in the 2007 time frame in order to allow experimentation with key capabilities the Services are developing in the near-term. These capabilities include Expeditionary Aerospace Forces, Network-Centric Operations, Expeditionary Maneuver Warfare, and the Interim Brigade Combat Team. Although 2007 was chosen as a “coordinating point” in time, the central thrust of the experiment was to determine how we can use current and near-term capabilities to improve our ability to conduct rapid and decisive operations, in this decade, without waiting for a major recapitalization or modernization of the force.

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## Participants

Over three hundred personnel representing JFCOM, all four Services, SOCOM, SPACECOM, TRANSCOM, CENTCOM and several supporting agencies participated in the experiment. The participants were organized into a representation of a regional unified command headquarters with a commander-in-chief; an operational-level joint headquarters built around a standing joint command and control element; an interagency component within the unified command headquarters; and



**Retired Army Gen. Gary Luck discusses a Joint Task Force with fellow Senior Concept Developers. Luck served as Chief of the Senior Concept Developers' team.**

functional component response cells portraying joint air, land, and maritime components.

A threat cell red-teamed concepts and plans, to identify critical vulnerabilities that could be exploited. A white cell, an assessment cell, and a support team provided adjudication of events, collected and analyzed results, and supported the experimentation environment.

A key capability within the experiment was a senior concept developer team composed of some of the nation's most renowned military and diplomatic senior leaders that served as experienced role players and concept analysts. This team, headed by retired Army Gen. Gary Luck (former CINC U.S. and United Nations Forces Korea), included retired Marine Corps Gen. Anthony Zinni, (former CINC U.S. Central Command) whose portrayed the unified command's commander-in-chief and retired Marine Corps Gen. Charles Wilhelm (former CINC U.S. Southern Command) who portrayed the operational-level commander. Senior diplomatic participants were former Ambassadors Robert Oakley and Edward Marks. Retired Army Gen. Charles Stiner portrayed the role of CINC U.S. Special Operations Command, and other recently retired senior officers with joint experience from each service played key component roles and provided detailed service insights. Retired Marine Corps Lt. Gen. Paul Van Riper headed the red team.

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## Week-by-Week Learning

The experiment consisted of four weeks of exercise play that portrayed a six-month period of crisis development and operational execution.

Week "0" provided an opportunity for extensive training and an event rehearsal. Participants were given three days of hands-on training and practical exercises using a simulated Common Relevant Operational Picture (CROP). They were also introduced to and familiarized with the concepts of Rapid Decisive Operations, Operational Net Assessment (ONA), Effects-Based Operations (EBO), and the Standing Joint Command and Control Element (SJC2E). One full day was dedicated to the orientation of the Senior Concept Developers.





**During the experiment, a real-world database was used to assure that source materials were available to support realistic planning for both U.S. and opposition force players.**

Week 1 focused the organization and operation of the Joint Force Headquarters (JFHQ) as an integral element of the CINC's Headquarters. Activity centered on updating and displaying an Operational Net Assessment and the transition of the SJC2E into the "core" element of a Joint Task Force headquarters. Also, conditions were set to allow Joint Interactive Planning (JIP) to begin in detail during Week 2.

Week 2 centered on an investigation of the collaborative planning process. The JIP collaborative planning process allows U.S. commanders to assess and act on information more quickly than the adversary. Achieving decision superiority in this manner allows operational planning and execution conducted in parallel instead of sequential progression, contributing to faster and better decisions. This is a significant departure from today's planning methodology.

Week 3 focused on effects-based operations, purposely stressing the organization and processes the JFHQ uses in simultaneously planning, coordinating, and executing operations. During this week

the JFHQ collaborated with the functional component response cells provided by the Services to integrate the conceptual capabilities of the Services into an effects-based, rapid decisive operation. The primary products of week 3 were a series of Effects Tasking Orders (a web-based product used instead of today's operations and fragmentary orders) that assigned specific responsibilities for effects accomplishment.

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## Virtual Experimentation Environment

The experiment used two primary models to create a realistic and robust synthetic operational environment. The Advanced Joint and Combined Operational Model (AJCOM) provided a constructive simulation to model the deployment of forces and large units and to generate sensor and intelligence reports. AJCOM modeled Blue (U.S.), Red (threat), and Green (other) forces as required. It was the lead simulation for experimentation weeks 1 & 2. It was also used to maintain operational level situational awareness during week 3.

The Joint Semi-Automated Forces (JSAF) Federation provided an entity-based simulation to simulate forces in a more detailed terrain box when higher fidelity resolution was required. It was the primary simulation for executing Service component vignettes during week 3. JSAF also modeled Blue, Red and Green forces and provided sensor information to the Global Command and Control System (GCCS) Common Relevant Operating Picture (CROP).

The simulation support for UV 01 was designed primarily to stimulate C4I systems GCCS at the operational level rather than model and simulate the complete battle space during the experiment. During the six-hour experiment "day" the simulations provided situational awareness information to the joint force headquarters' CROP in real time. Daily jumps forward in game time occurred at faster-than-real time and were reflected on C4I systems when the players began the next experiment day. AJCOM and JSAF were integrated at the C4I level to provide the synthetic battlespace for the experiment. Additional stand-alone simulations and tools were used as necessary to meet special experimentation requirements.

# The Ideas

Experimentation like Unified Vision 2001 provides us the opportunity to explore bold ideas for change to determine their potential value to joint warfighting before we make major investments in programs. It enables us to model innovative concepts, to try them in an operational environment, to learn from the outcomes, and to re-model until the idea develops into a powerful new joint concept or proves to be not particularly useful to the joint warfighter. Unified

Vision explored an interesting set of novel ideas, many of which demonstrated significant potential value to enhancing our current and future joint operational capabilities.

## *UV 01 Insights at a Glance*

IAC : Early and continuous Interagency Community involvement in a crisis is critical

ONA : The Operational Net Assessment is a process to gain and maintain comprehensive knowledge of the adversary, friendly characteristics, and nature of battlespace

JFHQ : One or more standing joint C2 elements at every CINC HQs reduces the ad-hoc nature of forming current JTF headquarters and can dramatically reduce the time from planning to operations

EBO : Effects-based operations require changing the way to think about mission accomplishment; has potential to advantage all elements of national power to influence or deter an adversary

## Characteristics of the Future Joint Battlespace

The ideas portrayed in UV 01 were built around a new construct for the art of operational warfare in the information age. That construct employs four central principles that describe the nature of 21st century joint operations. These four characteristics are applicable across the spectrum of future joint operations and are embodied in Unified Vision's operational concept of Rapid Decisive Operations.

First, operations will be knowledge-centric. The more we know about the enemy, the operational environment, and ourselves, the more precisely we will be able to focus our capabilities to produce desired effects. Creating and leveraging superior knowledge in the battlespace will enable decision superiority, reduce operational risk

and increase the pace, coherence, and effectiveness of operations.

Operations will be effects-based. Our assessments, planning and execution will focus on understanding and creating the desired effect against the adversary's complex and adaptive national war-making capability.

Operations will be coherently joint. Our joint force capabilities must be born joint. At the same time our legacy systems must be made fully interoperable.

We will fight as a fully networked force. This will allow us to plan, decide, and act collaboratively and concurrently to accomplish many tasks simultaneously.

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## Rapid Decisive Operations: A New Idea for Warfighting

### What is RDO?

Rapid Decisive Operations is a joint warfighting concept for defeating a competent regional threat that can employ the advanced military capabilities available in the global marketplace. The goal of RDO is to achieve success in weeks rather than the months similar operations in the last decade required. In RDO, the military instrument of national power acts in concert with and leverages the diplomatic, economic, and information instruments of national power to better understand and then to reduce those critical capabilities that give the enemy its ability to make war.

At the strategic level, the U.S. will attempt to influence and deter an adversary by using diplomatic, economic, and information-supported by relevant military flexible-deterrent options. If deterrence fails, RDO provides the capability to rapidly and decisively coerce, compel, or defeat the enemy to accomplish our strategic objectives without a lengthy campaign or an extensive buildup of forces. RDO will also set the conditions for transition to either post-conflict operations or extended combat operations, if necessary.



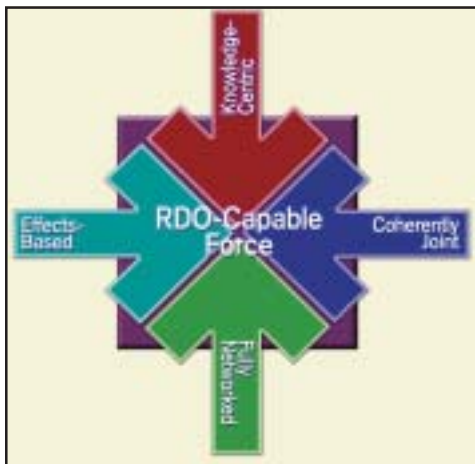
### *Rapid Decisive Operations*

RDO is the application of the full range of our national capabilities by a networked, coherently joint and interagency force. This force would conduct timely and direct effects based operations against an adversary we would see as a system of systems. RDO employ our asymmetric advantages in the knowledge, precision, and mobility of the joint force against an adversary's critical functions. RDO's goal is to create maximum shock and disruption to defeat the adversary's will and ability to fight.

RDO exploits significant asymmetrical advantages that are unique to the United States: knowledge creation and integration; strategic, operational, and tactical mobility; and precision in operations and effects. It also leverages our overwhelming ability to dominate the maritime, air, space, and information domains to attack the enemy from directions and with means that it can do little or nothing about.

### **How RDO works**

Legacy operations have been built around the principle that military success comes from the concentration of overwhelming combat power at the decisive time and place in the battle. RDO



proposes that in the information age, operational success comes from the distribution of precision capabilities to generate overwhelming effects on the enemy's ability and will to fight. RDO adds another potential way of fighting to our current terrain and force-oriented operations, building on, refining and enhancing emerging operational trends. It attacks the coherence of the enemy's ability to make war. RDO sees the enemy from an effects-based perspective as a complex, adaptive system whose coherence can be destroyed by breaking the war-making synergy that comes from the enemy's ability to integrate his military, political, economic, social, and information systems.

RDO consists of non-linear and non-contiguous actions. "Non-linear" means that instead of sequentially deploying, building bases, and then attacking with a predictable series of actions, we will instead conduct parallel actions in which planning, preparing, and acting are done simultaneously and dynamically. "Non-contiguous" means that instead of attacking along predictable, linked lines of advance, we will use our knowledge and mobility advantages to attack throughout the battlespace without those actions necessarily being connected in time and space – only in intent.

The forces conducting an RDO will fight as a coherently joint

team. Instead of pursuing independent air, sea, and land campaigns that are de-conflicted by the joint commander, in RDO the service components will provide capabilities to joint functional commanders who will dynamically integrate air, sea, and land forces into joint tactical action capabilities that can apply the full range of the capabilities of the joint force to create specific effects. Such an approach should enable U.S. forces to better comprehend and more effectively and rapidly defeat both traditional and non-traditional opponents.

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## Ideas for New Joint Capabilities

### **Operational Net Assessment (ONA)**

RDO requires both a detailed understanding of the battlespace and an accurate situational awareness. The battlespace understanding tool explored in Unified Vision was the Operational Net Assessment. The ONA is a systems-of-systems analysis of the nature of the battlespace (In which domains is the fight taking place?), the functioning of the enemy (How do his political, military, economic, social, information and infrastructure systems work and interact?), and ourselves (What diplomatic, information, military, and economic capabilities can we employ against the enemy?). Most importantly, the ONA informs decision makers from the strategic to the tactical level of those effects and of the supporting missions and tasks that could be employed to have maximum impact on the adversary's will and capability - and most significantly - of the consequences of creating those effects. The ONA leads to the identification of a "defeat mechanism" or the body and sequence of effects that will most directly lead to the enemy's collapse.

### **Common Relevant Operating Picture (CROP)**

A Common Relevant Operating Picture provides the joint force with shared situational awareness. While the ONA will provide an understanding of how the battlespace works, the CROP will give the joint force a real-time



### **What is CROP?**

The Common Relevant Operational Picture (CROP) is a method to present timely, fused, accurate, assured, and relevant information that can be tailored to meet the requirements of the user.



understanding of the actual conditions of the battlespace at any particular moment. The Common Relevant Operational Picture (CROP) is an information environment that consists of a map-based situational awareness display, a web-based information distribution system, and a suite of data, voice, and video collaboration tools. This capability is composed of commercial-off-the-shelf and government-off-the-shelf applications that are interfaced with existing C4I and other information sources. It includes a baseline information management plan and a set of tactics, techniques, and procedures for maximizing the usefulness of the information environment.

In joint operations, the CROP supports the networking of the various sensors available to the joint force and places the information collected by those sensors into a common, shared database. Presentation tools allow each user to select the type of information required

and to portray that information in the manner most useful for that user. This

flexibility in information

selection and presentation

brings relevance to the overwhelming

amount of information that the CROP

can generate. The common database

from which information is drawn provides

each user with consistent

information, vice the conflicting

data often provided by today's "stove-piped" collection and presentation systems.



### **Standing Joint Command and Control Element (SJC2E)**

The Standing Joint Command and Control Element is an idea for providing the joint commander with a coherently joint operational level planning and control staff. This experimental concept enables comprehensive examination of new joint command and control constructs in order to reduce the ad-hoc nature of current joint task force operations and increase responsiveness. Legacy operational-level joint headquarters (often organized as Joint Task Force headquarters)



are typically drawn from Service-pure operational headquarters and are augmented with capabilities from other Services as required and available. Often this ad hoc joint team not only lacks the skills necessary to plan and execute joint operations, but also seldom brings a comprehensive understanding of the conditions of the operation and mission to be executed. Operations in the last decade showed that this construct could not reach the level of joint proficiency required in time to be effective given the rapid pace of information age operations.

The SJC2E examined was a permanent body of joint planners organic to a geographic unified command headquarters. During peacetime, it would conduct continuous operational net assessment of potential crises in the command's area of responsibility, developing plans for and contributing to the theater's engagement plan. When a crisis requiring military action emerges, the SJC2E - with its pre-identified augmentation "plugs" from national centers of excellence with reachback to those centers, and liaisons from supporting



organizations - will provide a core of trained, equipped, and informed joint planners and operators immediately available to the CINC at the outset of a conflict. During a crisis situation, the SJC2E would form the core of a Standing Joint Force Headquarters (SJFHQ) as operations transition and flag/general officer commanders are designated and the geographic CINC apportion forces.

## Collaborative Planning

The SJC2E and the SJFHQ will depend heavily on advanced interactive planning tools to share information within itself as well as with its supporting staffs. This web-based environment will also enable the SJC2E or the SJFHQ to reach back to interagency capabilities and to various centers of excellence. Internal to both the SJC2E and the SJFHQ, collaborative tools will allow the creation of virtual centers, boards and cells that can conduct on-demand planning without having to convene formal physical meetings that consume valuable time. Collaboration with higher (the CINC) and subordinate (functional component) commanders and their staffs to conduct concurrent planning will dramatically shorten the time now required by the sequential planning that moves through the echelons of command. These capabilities will enable faster and better decisions for timely exploitation of rapidly emerging opportunities.

## Effects-Based Operations (EBO)

EBO is an operational level warfighting construct that provides the joint force with a better way to approach military operations. Historically, we have not adequately leveraged all instruments of National power in the prosecution of operational level warfighting, providing our opponents with “sanctuary” from the full weight of military and interagency power. This has often allowed our opponents to maintain cohesion between their warmaking and warfighting capabilities in the face of linear and sequential operations.

EBO uses the systems analysis of the enemy produced by the operational net assessment to attack the coherence of the enemy’s ability to make war. An EBO anticipates the conditions necessary to compel an enemy to cease hostilities or to fail to achieve their objectives. It determines what effects are necessary to create those

### ***EBO Concepts***

Effects Tasking Order — Formalized collaborative planning product; serves the function of today’s JTF Operations and Fragmentary Orders.

Effects Assessment — More complex than traditional battle damage assessment; damage assessment that includes first, second, and third order effects of U.S. actions on adversary system-of-systems.

conditions, and then puts together the right combinations of joint and interagency capabilities needed to generate those effects. The implementation of effects ideally begins immediately without a prolonged period of buildup before taking decisive action. EBO are knowledge-based operations that more effectively and efficiently allow the application of force or other national capabilities.

Essentially, EBO is a new way to think about mission accomplishment. It links the various instruments of national power (diplomatic, information, military, and economic) at the operational level. During Unified Vision, the exploration of EBO was focused on the SJC2E effects planning and tasking processes and products. The SJC2E is the organizational concept; the ONA is the operational tool; the interagency community is the framework; and, EBO is the fusion of all these elements.

### **Interagency Operations and an Interagency Cell at the Operational Level of War**

The participation of the interagency community (IAC) in joint planning is essential to successful effects-based operations, and it is a major enabler of RDO. The IAC participation is essential in the systems analysis of the enemy's integrated political, military, economic, social, information, and infrastructure capabilities. Interactive collaboration among the full membership of the IAC leads ultimately to the determination of how the diplomatic, information, military, and economic instruments of our national power can best be applied in order to generate the desired effects that will most rapidly result in the enemy's collapse.

The experiment explored at the strategic level, the potential of creating a Department of State counterpart for each CINC. This counterpart would have identical regional boundaries of responsibility. Working within their respective departments, these two powerful individuals could collaboratively focus their staff efforts on a developing crisis within their common geographic area. At the operational level of war, the experiment considered the idea of assigning an interagency staff element (a "JX") on the CINC's staff in order to formalize the connectivity between the IAC and the CINC. A JX that is staffed with experts from the IAC on the CINC staff, and has reachback to the information, analysis, and planning capabilities of their parent departments would serve to develop and coordinate a common national view of the crisis.



**During UV 01, members refined the EBO planning process.**

### **Effects-Based Planning and the Effects Tasking Order**

The primary enabler of the effects planning process was the collaborative environment that allowed for joint interactive planning. Unlike today's plans and orders, which focus on de-conflicting how the components of the joint force will achieve specific physical objectives, the effects-based planning process focuses on how to integrate the capabilities of the joint force to create effects on the enemy's ability to operate.

The effects-based planning process uses a flexibly structured and simplified "battle rhythm," requires fewer formal joint boards, and employs collaborative, near-simultaneous planning at each echelon of command (strategic, operational and tactical). By eliminating repetitive, time-consuming course-of-action assessment processes at each level, this new process reduces the current joint crisis action planning process from its current six steps down to three steps. Coupled with reachback capability to centers of excellence, the

effects-based planning approach provides decision-makers higher quality analytical products and reduces the number of people required in field headquarters.

The Effects Tasking Order (ETO) is the formal product of the effects-based planning process. It will replace both the current operations order (OPORD) and the fragmentary orders (FRAGO) produced today at the joint force level. It will provide better information and greater latitude to component commanders in developing their implementing plans and orders. An effects-to-task matrix developed collaboratively with the functional components will assist the SJFHQ and the components by synchronizing the joint force commander's desired effects with the specific component tasks necessary to achieve those effects.

The ETO will be a web-based product linked across echelons to critical details of the desired effects, their priority, and measures of effectiveness instead of multiple and cumbersome annexes. It will be non-cyclical and will be issued only as required and with changes highlighted for easy identification and rapid action.

### **Effects-Based Tasking – Executing Joint Effects**

Effects-based tasking proposes that the advanced command and control tools available in the information age can support dynamic tasking of joint force capabilities across functional component lines in order to create powerful effects. Instead of the relatively inflexible task organizations used today, effects-based tasking attempts to create joint teams - even at the tactical level of operations - for the purpose of creating a specific effect then releasing the tasked elements so they can be re-tasked near-immediately for subsequent actions in potentially radically different teams. Functional components which today focus on integrating joint capabilities within a particular domain (air, maritime, or land) can task for capabilities from different domains to put together the optimum set of forces to achieve a commander's desired effect.

The effects-based tasking process can build the "right" joint action teams at any level that can rapidly exploit time-sensitive opportunities as they are identified through the common relevant operating picture. This would replace the periodic issuing of single-domain tasking orders with dynamic, near-real-time tasking capability.

# The Findings

Unified Vision 2001 produced a rich body of learning which supported the hypotheses behind the new ideas being explored, found flaws in proposed concepts, and discovered additional ideas with great merit for further development.

The experiment strongly indicated **the merits of a standing joint command and control capability, such as the Standing Joint Command and Control Element (SJC2E), - which can**

**rapidly expand into a Standing Joint Force Headquarters - is a powerful tool for reducing the ad-hoc nature of establishing joint force headquarters in order to rapidly meet the requirements of 21st century operations.** UV 01 demonstrated that as a standing entity within a regional CINC's staff, the SJC2E achieves a level of joint proficiency, teamwork, and operational understanding far beyond the capabilities of today's ad hoc joint arrangements.

During the early phases of a crisis, it can develop the operational net assessment required for the mission, then transition to be the core of the joint

warfighting element that will execute

that assessment. Its functional cells vice traditional staff organization provide the SJC2E a considerable level of joint operational coherence. The combination of detailed knowledge of the operational situation and conditions, thorough understanding of the CINC's intent, and competence in joint planning and operations resulted in a considerable enhancement in overall joint mission proficiency. Extensive joint training of the SJC2E and its supporting "plugs," liaisons, and functional

## Findings Overview

- Strongly indicated that the Standing Joint Command and Control Element (SJC2E) / Standing Joint Force Headquarters is a powerful tool for solving the recurring problem of our joint force headquarters not reaching the level of joint proficiency rapidly enough for current requirements
- Participation of the interagency community in operational-level analysis and planning increased the ability of the JFHQ to produce and execute a truly effects-based approach to the mission
- Supported the potential of an effects-based approach at the operational level of war
- Supported the fundamental soundness of the ideas underpinning Rapid Decisive Operations
- Effects-based assessment emerged as the most challenging aspect of effects-based operations (EBO)
- Highlighted the potential of Operational Net Assessment (ONA) to enable rapid preparation of plans
- The National Fusion Center (NFC) idea, or Knowledge Management Center, merits further examination



headquarters emerged as a critical requirement and powerful enabler of joint proficiency at the operational and tactical levels. As the experimentation process continues through Millennium Challenge 02 we will gain greater understanding of the role of the SJC2E and the requirements and process for establishing and operating a SJFHQ.

**Participation of the interagency community in operational-level analysis and planning considerably increased the ability of the joint force headquarters to produce and execute a truly effects-based approach to the mission.** It enabled detailed understanding of the functioning, intent, and ability of the enemy to make war and the development of a truly effects-based plan that can coherently integrate all the instruments of national power into an extensive range of capabilities that can overwhelm the enemy's ability to cope. The key factor in making this approach possible was the presence of the interagency cell (or "JX") in the regional CINC's organic command and control system.

The experiment highlighted the potential of Operational Net Assessment. Although only rudimentary initial capabilities for ONA existed during UV 01, the participants using its basic processes discovered the tremendous value of using a system-of-systems approach to understanding the workings of a complex, adaptive enemy operating in an extended, 21st century battlespace. **Use of the ONA construct enabled rapid preparation of plans that precisely employed the full range of joint and interagency capabilities to generate the desired effects on the enemy's ability to operate coherently.**

The experiment also supported **the potential of an effects-based approach at the operational level of war.** UV 01 indicated that adding a coherence-based orientation to the terrain and force orientations currently in our operational art gives joint commanders an effective new tool for dealing with complex crises. By focusing on effects that disrupted the enemy's warfighting capabilities and directly attacked his perception of the battlespace and will to fight, the joint force in Unified Vision saw significant improvement in its ability to achieve a more rapid and decisive outcome.

Unified Vision also supported **the fundamental soundness of the ideas underpinning the warfighting concept of Rapid Decisive Operations.** The tactics, techniques, and procedures for this concept were only roughly defined by the start date of Unified Vision. However, the RDO principles of advantaging extensive operational knowledge; exploiting our strategic, operational, and



tactical mobility; and conducting distributed, non-linear, and non-contiguous fire and maneuver held up under the rigorous conditions of the experiment.

Initially, the RDO concept envisioned the elimination of traditional campaign phasing. However, the experiment illustrated that **the joint force must continue to consider some type of phasing for deployment, the conduct of operations, and transition or redeployment.** Similarly, concept developers hypothesized that with advanced command and control systems, fast tempo decisive combat operations would require only dynamic, “what if” branch planning for emerging operations. However, deeper examination illustrated the continued requirement for pre-developed sequels or future plans.

**Effects-based assessment emerged as the most elusive and challenging aspect of EBO.**

Dynamic re-tasking and branch and sequel planning hinge on timely, comprehensive, multi-disciplined and multi-source assessment of actions. This level of assessment is far more complex than classic “battle damage assessment” (BDA). It includes the recognition of unintended consequences as well as second- and third-order effect assessment. This type of assessment

appears to be more intuitive than quantifiable. Before an effective effects-based assessment that supports the full promise of EBO can be exploited, considerable study and development will be required.

**The critical need for a national information fusion capability emerged as the most important new development resulting from UV 01.** The idea of a National Fusion Center (NFC), or Knowledge Management Center, merits further examination. This NFC would synthesize information provided from all sources and make the resulting knowledge available for ONA development by the various agencies of national power. By providing comprehensive information and detailed analyses, the processes and products of an NFC can provide the forward commanders with well considered and supported recommendations on potential outcomes of proposed courses of action. The joint commanders can use these recommendations to support the tough decisions they will have to make in the complex and high-speed environment of 21st century operations.



Senior Concept Developer and retired Marine Gen. Charles Wilhelm provided a CINC-level perspective on new ideas generated from the JFHQ.

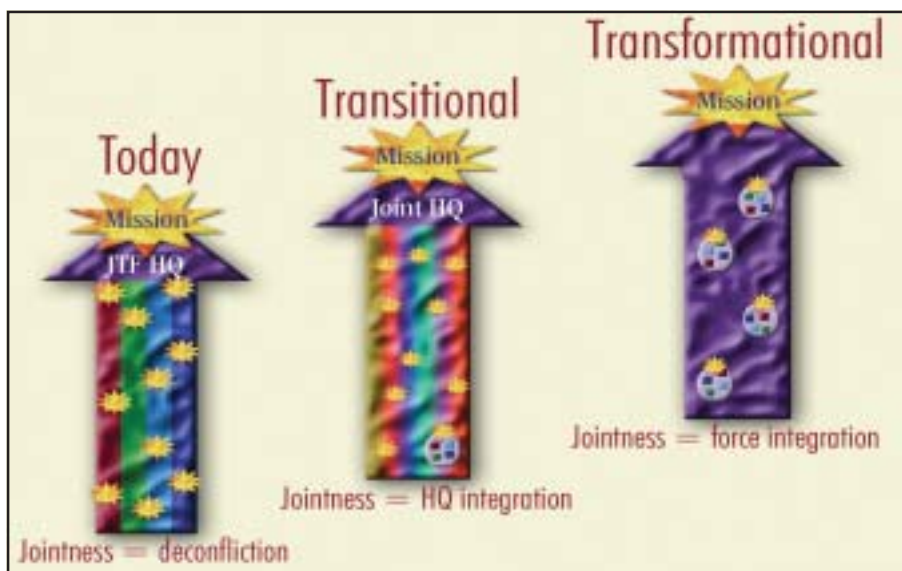
# The Way Ahead

Joint Forces Command and its partners in joint concept development and experimentation are moving aggressively to build on the learning that came from Unified Vision 2001 in order to move its best and most feasible ideas to a set of joint warfighting capabilities. Immediately upon the conclusion of UV 01, JFCOM began a set of limited objective experiments that focused on steps to operationalize the standing joint force command and control element, operational net assessment, and effects-based operations. Additionally, in the summer of 2002, JFCOM, the Services, and U.S. Special Operations Command will conduct a major joint experiment called Millennium Challenge 2002 that will integrate these capabilities and assess to what extent we can conduct rapid, decisive operations in this decade.

Initial planning is also underway to embark on an experimentation path called the Olympic Challenge. The Olympic Challenge work will determine what operational capabilities the joint force will need to conduct successful joint and combined operations in the next decade. The discoveries from these experiments will provide significant recommendations on how the Department of Defense needs to proceed on the transformation of the joint force.

The center of gravity of this effort will be the development of a prototype Joint Command and Control Capability for each regional unified command by 2004. This effort will expand the work already underway in our initial Standing Joint Force Command and Control Element, to include developing the doctrine (tactics, techniques, and procedures), organizational structure (including relationship to theater and functional component headquarters), and technology tools required to turn this powerful idea into an operational reality. In this initiative, JFCOM is partnering with the regional unified commands to develop a standard set of capabilities that can effectively support the unique requirements of each of our global theaters of operation.

Maturing the idea of Operational Net Assessment is critical to this effort. JFCOM has partnered with Defense Advanced Research Projects Agency (DARPA) to further develop advanced capabilities such as DARPA's projects Genoa, Archer, and Wargaming the Asymmetric Environment as the technical components of ONA. The target is to co-evolve these capabilities with the refinement of the SJC2E. Together, the ONA, the SJC2E, and their collaborative processes and tools comprise the major elements of the standing Joint Command and Control Capability, a top priority for both the Secretary of Defense and the Chairman of the Joint Chiefs of Staff.



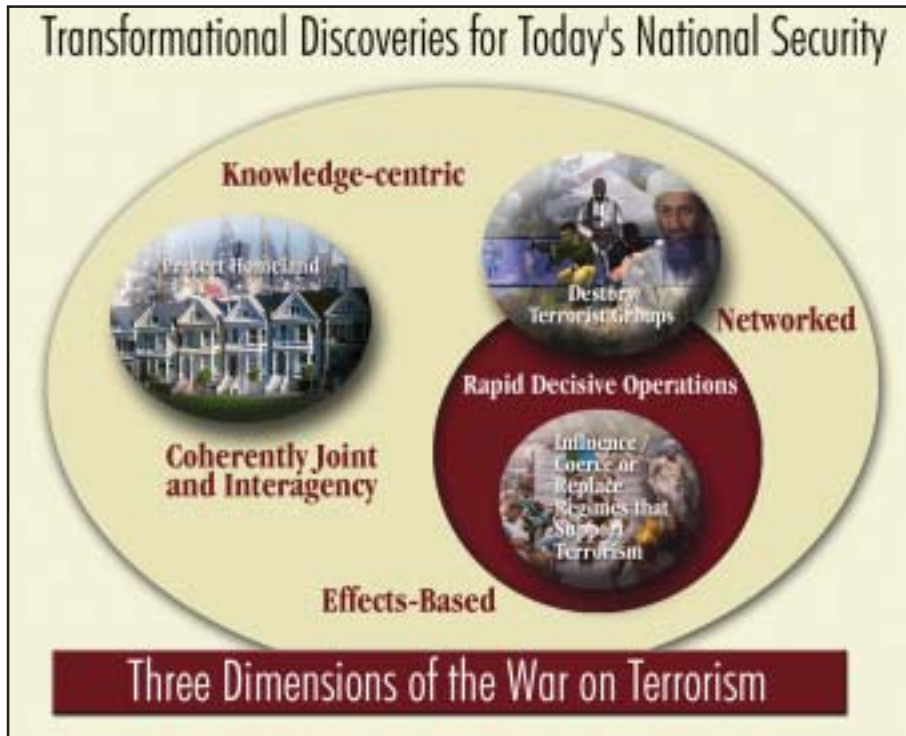
Many of the collaborative processes and tools explored in Unified Vision and related limited objective experiments are off-the-shelf capabilities that can be integrated into joint organizations and operations in the near term. JFCOM is already including some of these initiatives in its own task organization for its role in homeland security and its support of other unified commands in their actions in the war on terrorism.

Our enhanced interagency operations concept development efforts have resulted in a solid base of interagency community contacts. Collectively, these IAC contacts accept the premise that better collaboration will enable the interagency community to be better informed during ongoing planning and actions. When fully realized, coherent interagency operations will help streamline the national decision-making process, and will support and enable the rapid and effective use of the appropriate instruments of national power. However, this is an extremely complex arena, whose full exploitation will require great cooperation and effort across the interagency community.

JFCOM is also aggressively pursuing multinational partners we can work with to expand enhanced coalition operations. As once again illustrated by our cooperation with key allies in the war on terrorism, it is essential that U.S. forces be capable of interoperable joint and combined action (both technically and conceptually) with our allies. Members of the Multinational Interoperability Council nations (U.K., Canada, Australia, Germany, and France) are participating in a set of multinational limited objective experiments on the Olympic Challenge pathway. These LOEs will focus on building coalition interoperability.

## Summary

Unified Vision 2001 exceeded our expectations for providing insights on accelerating the development of our most important ideas. The learning generated by UV 01 is already contributing directly and materially to the war on terrorism. JFCOM has harvested and applied the best ideas in its homeland defense operations and has shared them with other unified commands as they prepare for their critical combat roles. JFCOM and the Services learned important lessons and are pushing forward at an ever increasing pace their work on developing and operationalizing key concepts and capabilities. The experiment achieved its objective of setting the conditions for 2002's major joint experiment, Millennium Challenge. Millennium Challenge 2002 will further develop the Rapid Decisive Operations warfighting concept and provide the operational joint context critical for integrating the operational net assessment, common relevant operating picture, the standing joint command and control element, and effects-based approaches to joint operations.





# United States Joint Forces Command

## Joint Experimentation Concept Executive Report: 01-02

### Unified Vision 2001: Rapid Decisive Operations in 2007

As the Chief Advocate for Jointness, United States Joint Forces Command maximizes the Nation's future and present military capabilities through joint concept development and experimentation, recommending joint requirements, advancing interoperability, conducting joint training, and providing ready, CONUS-based forces and capabilities to support other CINCs, the Atlantic Theater, and domestic requirements including the land and maritime defense of the continental United States and Military Assistance to Civil Authorities.

For more information on UV 01 and Joint Experimentation, please phone (757) 836-6555 or visit our web site at [www.je.jfcom.mil](http://www.je.jfcom.mil)



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